

Attorney Docket No. 2020.23(B)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: W. Neal Bebbler et al.
Serial No. 09/927,034
Filed: August 9, 2001
For: HIGH STRENGTH LIGHTWEIGHT
COMPOSITE FABRIC WITH LOW GAS
PERMEABILITY

Group Art Unit 1771

March 18, 2002

Assistant Commissioner for Patents
Box No Fee
Washington, DC 20231

SUPPLEMENTAL PRELIMINARY AMENDMENTS

Sir:

This is to supplement the preliminary amendment mailed on August 9, 2001. Please
amend the application as follows:

In the Specification:

Please delete the paragraph beginning at page 3, line 11 and replace it with the
following paragraph:

B1
In heavy load cargo airship applications, however, fabrics the same as or similar to
the Mater '558 patent tend to form the woven fabric which is thick and bulky. If typical
industrial polyester fiber is used the strength of the fiber and the demand of these large
airships leads to a very large yarn of perhaps 6-10,000 denier. The alternate is to use high-
strength synthetic materials such as aromatic polyamides, one example of which is available
from DuPont under the Kevlar® trademark or liquid crystal polyester (e.g., Vectran®) in the
form of highly twisted yarns in a plain woven structure (e.g., U.S. Patents Nos. 5,837,623
and 5,565,264). Even if the fibers have tenacities of 20 grams per denier the yarns required
become thick and bulky with the typical twist levels. Because of these strength requirements
for the hull material, the yarns, and thus the weave, are typically formed very thick. In turn,